Scientific Works. Series C. Veterinary Medicine. Vol. LXII (2)
ISSN 2065-1295; ISSN 2343-9394 (CD-ROM); ISSN 2067-3663 (Online); ISSN-L 2065-1295

OESOPHAGEAL FOREIGN BODY IN A CAT: CASE REPORT

**Teodor-Florian STROE*, Aurel MUSTE, Ioana DÎRLEA,
Marius MUSTE, Iulian ILIE, Florin BETEG**

University of Agricultural Science and Veterinary Medicine Cluj-Napoca,
Faculty of veterinary Medicine, 3-5 Manastur Street, 400372, Cluj-Napoca, Romania,
Tel: +40-264-596.384, Fax: +40-264-593.792

*Corresponding author e-mail: stroeteodorflorian@yahoo.com

Abstract

Oesophageal foreign body are relatively rare compared with gastrointestinal ones,but they can be encountered in clinical practice. Dogs are more likely to have oesophageal foreign bodies than are cats due to their indiscriminate eating habits. The most common oesophageal foreign bodies encountered are bones, needles, fish hooks and dental chews. Usually occurs with an object for which the size, texture or shape does not permit free passage through the oesophagus into the stomach causing the object to becomeentraped.
A fourteen years old cat was presented to our clinic with dysphagia, retching, regurgitation, ptyalism, lack of appetite and obvious signs of discomfort. From the anamnesis it resulted that the cat was feed two days before consultation with chicken that contained bones. After clinical examination ancervico-thoracic radiography was made, based on radiologic exam the diagnosis was oesophageal obstruction.
Because of the shape and dimension of the foreign body endoscopy was not possible, the only treatment left was surgery. The cat was scheduled for surgery in the same day after blood analysis.

Key words: *cat, foreign body, oesophagus.*

INTRODUCTION

Esophageal foreign body are relatively rare compared with gastrointestinal ones, but they can be encountered in clinical practice. In cats esophageal obstruction is less common than other gastrointestinal obstructions (Bebchuk, 2002). Indiscriminate eaters, dogs, are more affected than cats who are more particular eaters but cases do appear. Most common foreign bodies encountered are bones, fish hooks, needles, balls and dental chews.
Exposure usually occurs because of their hunting or playing behavior (Johnson, 1994). Ingestion of avian V-shaped bones clavicula has been described as a reason of obstruction of the pharynx and proximal oesophagus (Rendano et al., 1988).
If the foreign body remains entrapped several days, repeated peristaltic waves can produce pressure necrosis of the mucosa, submucosa and external layers of the oesophagus at the contact points. The secondary esophageal damage depends on the shape, size of the object and time that it is on contact with the mucosa (Johnson and Sherding, 2000; Gualitiere, 2001). Traction with a forceps can be successful if the foreign body is situated in the proximal part of the digestive tract (pharynx and proximal esophagus) and the shape and size of the foreign body permit this.
Endoscopy permits visualization and location of the foreign body and majority can be extracted without recourse to surgery.

MATERIALS AND METHODS

A fourteen years old cat was presented for consultation to Surgery Department of the Faculty of Veterinary Medicine in Cluj with signs of dysphagia, regurgitation, retching, restlessness, lack of appetite and ptyalism.
From the anamnesis it resulted that the cat was feed with raw chicken breast two day before consultation. Also from the clinical exam it resulted that the cat was missing the following tooth's: 101, 103, 107, 201, 202, 204, 203, 301, 302, 304, 308, 402, 403, 409(Triadan system), tartar, plaque was present and some signs of gingivitis.
Based on clinical findings and anamnesis we thought of a foreign body and the patient was send for an radiological exam. The radiological exam confirmed our suspicion of a foreign body that was located on the cervical esophagus (fig. 1).

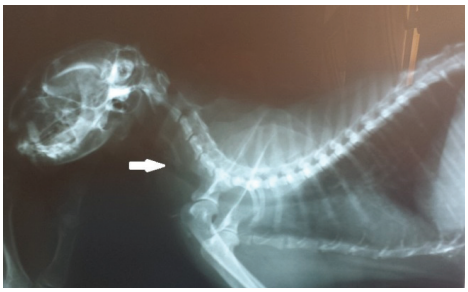

Figure 1. Foreign body located in cervical esophagus

Based on the shape (V-shape) and anamnesis we thought that it was a bird clavicula, therefore removing it with a forceps or endoscopy was not possible the only remaining therapy was surgery.Blood samples were taken for laboratory evaluation, haematology revealed a mild leukocytosis, other parameters were unremarkable. After this the cat was scheduled for surgery two hours later.

Anesthesia protocol was "magic kitty" (medetomidine 100 µg + butorphanol 1 mg + ketamin 10 mg/animal) we choose this protocol because it was a short time intervention. The surgical field was prepared aseptically and an i.v. catheter was placed for fluid therapy before and during surgery with NaCl 0.9% 20 ml/kg and glucoses 5% 10 ml/kg .

The cat was restrain in dorsal decubitus on a heated surgical table, we approached the esophagus by a ventral midline incision, separating the paired sternohyoid muscles and retracting the trachea to the right (fig. 2).

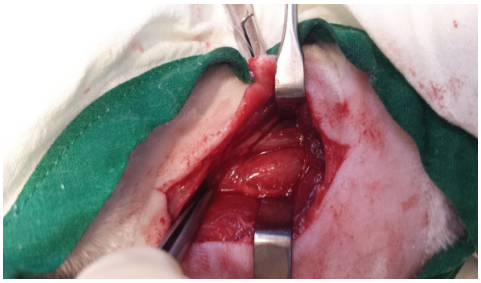

Figure 2. Ventral midline incision

Should take care not to cut the carotid artery and when retracting the trachea not damage to the recurrent laryngeal nerve. After identifying the esophagus a stab incision was made and the incision was extended as much as necessary (fig. 3).

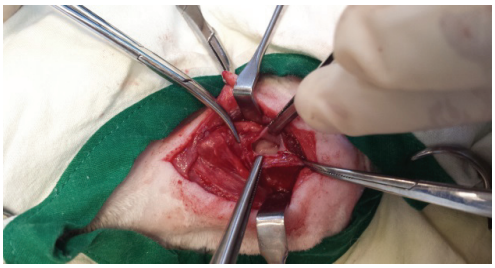

Figure 3. Esophagus incision

We proceed locking for the foreign body and extracting it from the esophagus. Because of is size and shape (clavicular bird bone) (fig. 4) the bone could not be removed until it was cut in two pieces with a scissor (fig. 5).

After removal the esophagus was checked to see if the mucosa had any injuries. Because the esophagus was unaffected, only a simple wound cleaning and a local antiseptic (methylene blue) was applied (fig. 6).

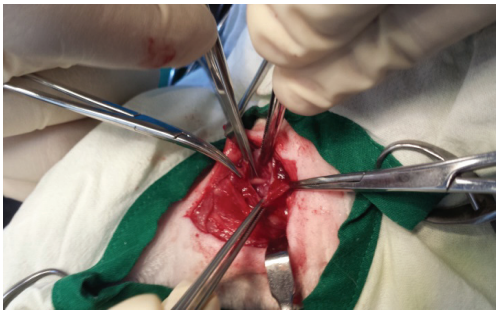

Figure 4. Entrapped bone

Figure 5. Removed foreign body

Next step was suturing the esophagus in two-layer pattern, first layer was mucosa and submucosa in a simple interrupted pattern with the knots inside the esophagus lumen, and the second layer apposing the muscularis and adventitia in a continues inverting pattern. The

suture material was Monocryl®3-0 (absorbable monofilament) for both layers (fig. 7).

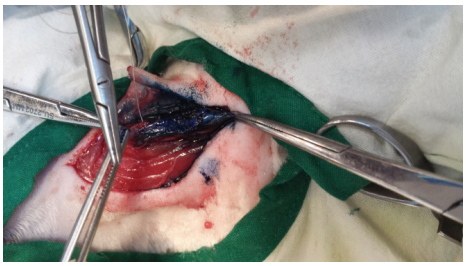

Figure 6. Local antiseptic

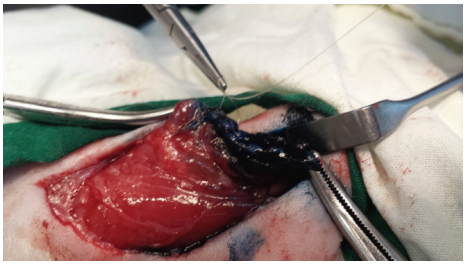

Figure 7. Suture of the esophagus

After esophagus suture the anatomical plans were apposed with a simple continues suture usingVicryl®2-0 (fig. 8) and the skin was sutured in "U" suture pattern withMersilk®2-0 (fig. 9).

Figure 8. Apposed muscular plans

Figure 9. Skin suture

RESULTS AND DISCUSSIONS

Esophagotomy was the only treatment in this case because the shape and position of the bone, if forceps removal was tried it could result in sever damage to the oesophagus, also endoscopy would result in failure.
Postoperative care consisted of antibiotic therapy (cephalexin 20mg/kg i.m for 7 days), anti-inflammatory (meloxicam 0,2mg/kg s.c for 5 days), gastric protectors (ranitidine 2mg/kg i.v for 9 days) andoral antiseptic (methylene blue twice a day for 7 days).
First two days received only intravenous fluid therapy with NaCl 0.9% 20ml/kg, Glucoses 10ml/kg, Duphalyte®15ml/kg twice a day and vitamin C 1ml/cat/day.
After two days in the cat diet it was introduced water in small amounts andViyo Recuperation Cat®30ml/cat/day divided in three doses, in the fifth day post operatory the cat received Hill's® Prescription Diet® a/d® Canine/Feline Critical Care. Because of the animal status it was recommended a semi-solid diet for life time and meat with bones it was forbidden.
The cat was maintained under observation for three day and discharged after because she progressed well and had no signs of regurgitation after meals. The cat had a little hyperthermia (39.2^0-39.4^0C) in the first three days after it became normal. The owner came with the cat for treatment every day till the ninth day when the threads were removed.
After nine days the cat was fully recovered without any complications.

CONCLUSIONS

The number of cases of foreign body at the esophagus level in cats are rare but can appear.
In case of foreign bodies at the esophagus level it can be tried to remove with the forceps or by endoscopy but in some cases surgery is the only solution.
Surgical procedure was choose because the shape of the bone did not permit to extract it by non-surgical methods and if it was tried it could result in an esophagus rupture or perforation.
In our case the cat recovered without any complications.

REFERENCES

Bebchuk T.N., 2002.Feline gastrointestinal foreign bodies. Veterinary Clinic North America: Small Animal Practice 32 (4), 861-880.

Gualitiere M., 2001.Esophagoscopy. Veterinary Clinic North America: Small Animal Practice 31, 605-627.

Johnson S.E., 1994.Diseases of the esophagus. In: Sherding (ed), The cat: diseases and clinical management (2nd edn). New York: Churchill Livingstone, pp. 1153-1180.

Johnson S.E., Sherding R.G., 2000.Diseases of the esophagus and disorders of swallowing. In: Birchard, Sherding (eds), Saunders manual of small animal practice (2nd edn). Philadelphia: WB Saunders, 727-744.

Rendano V.T., Zimmer J.F., Wallach M.S., Jacobson R., 1988. Impaction of the pharynx and oesophagus by avian bones in the dog and cat. Veterinary Radiology 29 (3), 213-216.

ANIMAL PRODUCTION, PUBLIC HEALTH AND FOOD QUALITY CONTROL